

TAIMEDE BIOSTIMULAATORID. KUIVAINESISALDUSE
MÄÄRAMINE

Plant biostimulants - Determination of dry matter

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 17704:2024 sisaldab Euroopa standardi EN 17704:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 27.11.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 17704:2024 consists of the English text of the European standard EN 17704:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 27.11.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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English Version

Plant biostimulants - Determination of dry matter

Biostimulants des végétaux - Détermination de la
matière sèchePflanzen-Biostimulanzien - Bestimmung der
Trockenmasse

This European Standard was approved by CEN on 26 August 2024.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17704:2024) has been prepared by Technical Committee CEN/TC 455 “Plant biostimulants”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 17704:2022.

EN 17704:2024 includes the following significant technical changes with respect to CEN/TS 17704:2022:

- Introduction;
- Scope – text concerning blends has been improved;
- Normative references to sampling and sample pretreatment have been added;
- Terms and definitions have been modified to be more general;
- Bibliography – references have been reordered;
- Reference to a specific provider of sand has been deleted;
- A subclause to include test results has been added to Clause 12.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

The European Committee for Standardization (CEN) was requested by the European Commission (EC) to draft European Standards or European Standardization deliverables to support the implementation of Regulation (EU) 2019/1009 of 5 June 2019 [1] laying down rules on the making available on the market of EU fertilising products (“FPR” or “Fertilising Products Regulation”).

This standardization request, presented as SR M/564 and relevant amendments, also contributes to the Communication on “Innovating for Sustainable Growth: A Bio economy for Europe”. The interest in plant biostimulants has increased significantly in Europe as a valuable tool to use in agriculture. Standardization was identified as having an important role in order to promote the use of biostimulants. The work of CEN/TC 455 seeks to improve the reliability of the supply chain, thereby improving the confidence of farmers, industry, and consumers in biostimulants, and will promote and support commercialisation of the European biostimulant industry.

The other standards for determination of dry matter in solid fertilizers and liming materials [2, 3], in soil improvers and growing media [4] and sludge, soil and other solid matrices [5, 6] were studied as a basis of the described method. The sand pan technique suitable for liquid biostimulants where there is a risk of a cake surface formation or foam formation was based on the method of food analysis [7].

WARNING — Persons using this document should be familiar with usual laboratory practice. This document does not purport to address all of the safety issues, if any, associated with its use. It is the responsibility of the user to establish appropriate health and safety practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted according to this document are carried out by suitably trained staff.

1 Scope

This document specifies the procedure for the determination of dry residue and calculation of the dry matter fraction of plant biostimulants for which the results of performed analysis are to be calculated to the dry matter basis.

This document is applicable to the blends of fertilizing products where a blend is a mix of at least two of the following component EU fertilising products categories: Fertilizers, Liming Materials, Soil Improvers, Growing Media, Inhibitors, Plant Biostimulants, and where the following category Plant Biostimulants is the highest percentage in the blend by mass or volume, or in the case of liquid form by dry mass. If Plant Biostimulants is not the highest percentage in the blend, the European Standard for the highest percentage of the blend applies. In case a blend of fertilizing products is composed of components in equal quantity or in case the component EU fertilising products used for the blend have identical formulations¹, the user decides which standard to apply.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 17702-1:2024, *Plant biostimulants — Sampling and sample preparation — Part 1: Sampling*

EN 17702-2:2024, *Plant biostimulants — Sampling and sample preparation — Part 2: Sample preparation*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org>

3.1

dry residue

remaining mass fraction of a sample after a drying process under specified conditions

3.2

dry matter fraction

dry matter

mass fraction of a sample calculated by the determination of dry residue

4 Principle

The samples are dried to a constant mass in an oven at (105 ± 2) °C. The difference in mass before and after the drying process is used to determine dry matter. This method applies to solid samples and samples which become solid during the drying process.

¹ An example of such a blend is a product with two claimed functions consisting of a non-microbial plant biostimulant and an organic fertilizer composed of 1 kg/kg of plant biostimulant from seaweed.